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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Isom

Serial No.: 08/905,701

Filed: August 4, 1997

For: **Method of Sequencing Computer
Controlled Tasks Based on the Relative
Spatial Location of Task Objects in a
Directional Field**

Attorney's Docket No. 4210-001

Opie, George L.
Examiner
Group Art Unit 2151

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Technology Center 2100

Raleigh, North Carolina

May 29, 2002

Commissioner for Patents
Box AF
Washington, D.C. 20231

Dear Sir:

REPLY BRIEF

This Reply Brief is responsive to the Examiner's Answer dated March 29, 2002. To support the obviousness rejection, the Examiner equates the bi-directional data flow described in Ingalls with Applicant's claimed directional attribute. However, the so-called "bi-directional data flow" in Ingalls is not the same thing as a directional attribute for a directional field as set forth in the claims.

The Ingalls reference describes a graphical programming environment in which simple computer programs may be constructed by graphically connecting visual objects representing programming components. The programmer creates programs by placing graphic objects representing programming components on a background and manually linking the graphical objects to establish the program flow. The links may be either directional or bi-directional. However, the sequence of operations is not determined by the relative spatial location of the

programming objects on a background. The background in Ingalls does not have a directional property associated with it and has no influence whatsoever on the program flow. On the contrary, the program sequence or flow is determined by the explicit links manually created by the user between objects. Thus, the background in Ingalls performs the same function as a blank sheet of paper. It provides a workspace on which objects may be placed but does not interact with, or affect, the sequencing of objects placed on the workspace. In short, Ingalls does not teach any directional attribute that controls sequencing of task objects in a directional field, much less a user-controllable directional attribute.

If anything, Ingalls teaches away from Applicant's invention. Ingalls teaches that blocks or programming components are explicitly linked together by the user, either within a directional or bi-directional data flow links. As discussed in Applicant's specification, one distinction of the present invention over prior art task scheduling systems is that the user need not explicitly link task objects together. Instead, in the claimed invention, task objects are automatically linked together by the computer based on the relative spatial location of the objects in the directional field.

The concept of bi-directionality as described in Ingalls has nothing whatsoever to do with the sequencing of tasks. The concept of bi-directionality is simply a recognition that some programming objects exhibit bi-directional behavior. Ingalls uses, as an example of bi-directionality, a Fahrenheit-to-Centigrade converter shown in Figure 2A. The temperature converter in Figure 2A is bi-directional, that is, it may convert Fahrenheit to Centigrade or vice versa. The program is represented graphically using two slider controls and a temperature converter. The temperature converter determines the operation to perform based on input being from the left or right. That is, when temperature is input using the right-hand slider control, the temperature converter converts the input temperature in degrees Fahrenheit to degrees Centigrade. Conversely, when a temperature is input using the left-hand slider control, the temperature converter converts the input temperature in degrees Centigrade to degrees

Fahrenheit. In neither case is the task sequence determined by the relative spatial location of the objects. While the temperature converter is shown between the slider controls in Figure 2A, it could just as easily be to the left or right of both slider controls and would function the same.


Figure 2A of Ingalls should be contrasted with Figures 1 and 5 of the application. As shown in these figures, a number of task objects 14 are placed on a directional field 12 having a directional attribute 18. Note that the sequence of tasks can be changed simply by changing the directional attribute 18. In Ingalls, the data flow or task sequence is not dependent on a user-changeable directional attribute. The data flows are simply pre-defined by the user by manually linking the graphical objects to define one or more data flows.

In short, the Examiner's strained interpretation of Ingalls fails to establish a *prima facie* case of obviousness. Accordingly, a refusal of the Examiner to allow the claims should be reversed.

Respectfully submitted,

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